



## Safety Data Sheet

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|                        |           |                         |          |
|------------------------|-----------|-------------------------|----------|
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### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Avagard™ D Instant Hand Antiseptic with Moisturizers

#### Product Identification Numbers

70-2007-2261-2, 70-2007-2262-0, 70-2007-3500-2, 70-2007-3501-0, 70-2007-6239-4, 70-2007-6373-1, 70-2007-7094-2

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Hand sanitizer.

#### 1.3. Supplier's details

|                      |   |
|----------------------|---|
| <b>MANUFACTURER:</b> | 3M                                      |
| <b>DIVISION:</b>     | Infection Prevention Division           |
| <b>ADDRESS:</b>      | 3M Center, St. Paul, MN 55144-1000, USA |
| <b>Telephone:</b>    | 1-888-3M HELPS (1-888-364-3577)         |

#### 1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

### SECTION 2: Hazard identification

#### 2.1. Hazard classification

Flammable Liquid: Category 2.

Serious Eye Damage/Irritation: Category 2B.

Specific Target Organ Toxicity (central nervous system): Category 3.

#### 2.2. Label elements

##### Signal word

Danger

##### Symbols

Flame | Exclamation mark |

##### Pictograms

**Hazard Statements**

Highly flammable liquid and vapor.

Causes eye irritation.

May cause drowsiness or dizziness.

**Precautionary Statements****General:**

Keep out of reach of children.

**Prevention:**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Ground/bond container and receiving equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Keep container tightly closed.

Use explosion-proof electrical/ventilating/lighting equipment.

Avoid breathing dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.

**Response:**

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

If eye irritation persists: Get medical advice/attention.

Call a POISON CENTER or doctor/physician if you feel unwell.

In case of fire: Use a fire fighting agent suitable for flammable liquids and solids such as dry chemical or carbon dioxide to extinguish.

**Storage:**

Store in a well-ventilated place. Keep container tightly closed.

Keep cool.

Store locked up.

**Disposal:**

Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

**Notes to Physician:**

Not applicable

**2.3. Hazards not otherwise classified**

None.

**SECTION 3: Composition/information on ingredients**

| Ingredient          | C.A.S. No. | % by Wt                |
|---------------------|------------|------------------------|
| Ethyl alcohol w/w   | 64-17-5    | 50 - 70 Trade Secret * |
| Water               | 7732-18-5  | 25 - 35 Trade Secret * |
| Polyethylene glycol | 25322-68-3 | < 3 Trade Secret *     |

|                 |             |                    |
|-----------------|-------------|--------------------|
| Docosyl alcohol | 661-19-8    | < 2 Trade Secret * |
| Squalane        | 111-01-3    | < 2 Trade Secret * |
| Alcohols        | 26636-40-8  | < 2 Trade Secret * |
| Fatty acids     | 103213-20-3 | < 2 Trade Secret * |

\*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### Inhalation:

Remove person to fresh air. If you feel unwell, get medical attention.

#### Skin Contact:

No need for first aid is anticipated.

#### Eye Contact:

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

#### If Swallowed:

Rinse mouth. If you feel unwell, get medical attention.

### 4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

### 4.3. Indication of any immediate medical attention and special treatment required

Not applicable

## SECTION 5: Fire-fighting measures

### 5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for flammable liquids and solids such as dry chemical or carbon dioxide to extinguish.

### 5.2. Special hazards arising from the substance or mixture

Closed containers exposed to heat from fire may build pressure and explode.

### Hazardous Decomposition or By-Products

#### Substance

Carbon monoxide

Carbon dioxide

#### Condition

During Combustion

During Combustion

### 5.3. Special protective actions for fire-fighters

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools.

Ventilate the area with fresh air. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

## 6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

## 6.3. Methods and material for containment and cleaning up

Contain spill. Cover spill area with a fire-extinguishing foam designed for use on solvents, such as alcohols and acetone, that can dissolve in water. An AR - AFFF type foam is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with detergent and water. Seal the container. Dispose of collected material as soon as possible.

# SECTION 7: Handling and storage

## 7.1. Precautions for safe handling

Avoid eye contact. Keep out of reach of children. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Avoid release to the environment. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapor accumulation.

## 7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store away from heat. Store away from acids. Store away from oxidizing agents.

# SECTION 8: Exposure controls/personal protection

## 8.1. Control parameters

### Occupational exposure limits

| Ingredient          | C.A.S. No. | Agency                         | Limit type                   | Additional Comments |
|---------------------|------------|--------------------------------|------------------------------|---------------------|
| Polyethylene glycol | 25322-68-3 | American Indust. Hygiene Assoc | TWA(as particulate):10 mg/m3 |                     |
| Ethyl alcohol w/w   | 64-17-5    | Amer Conf of Gov. Indust. Hyg. | STEL:1000 ppm                |                     |
| Ethyl alcohol w/w   | 64-17-5    | US Dept of Labor - OSHA        | TWA:1900 mg/m3(1000 ppm)     |                     |

Amer Conf of Gov. Indust. Hyg. : American Conference of Governmental Industrial Hygienists

American Indust. Hygiene Assoc : American Industrial Hygiene Association

Chemical Manufacturer Rec Guid : Chemical Manufacturer's Recommended Guidelines

US Dept of Labor - OSHA : United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

## 8.2. Exposure controls

### 8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment. Use explosion-proof ventilation equipment.

### 8.2.2. Personal protective equipment (PPE)

#### Eye/face protection

None required.

#### Skin/hand protection

No chemical protective gloves are required.

#### Respiratory protection

None required.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|   |  |
|---|--|
| General Physical Form:                  | Liquid   |
| Odor, Color, Grade:                     | White viscous liquid with slight alcohol odor. |
| Odor threshold                          | <i>No Data Available</i>                       |
| pH                                      | 6  |
| Melting point                           | <i>Not Applicable</i>                          |
| Boiling Point                           | 172 °F   |
| Flash Point                             | 69.8 °F  |
| Evaporation rate                        | 1.4 [ <i>Ref Std: BUOAC=1</i> ]                |
| Flammability (solid, gas)               | Not Applicable                                 |
| Flammable Limits(LEL)                   | 3.28 % volume                                  |
| Flammable Limits(UEL)                   | 19 % volume                                    |
| Vapor Density                           | 1.6 [ <i>Ref Std: AIR=1</i> ]                  |
| Specific Gravity                        | 0.83 [ <i>Ref Std: WATER=1</i> ]               |
| Solubility in Water                     | Moderate                                       |
| Solubility- non-water                   | <i>No Data Available</i>                       |
| Partition coefficient: n-octanol/ water | <i>No Data Available</i>                       |
| Autoignition temperature                | 1,470 °F                                       |
| Decomposition temperature               | <i>No Data Available</i>                       |
| Viscosity                               | 50,000 - 250,000 centipoise                    |
| Volatile Organic Compounds              | 496 g/l  |
| Percent volatile                        | 90 % weight                                    |
| VOC Less H2O & Exempt Solvents          | 630 g/l  |

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

### 10.2. Chemical stability

Stable.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Heat

#### 10.5. Incompatible materials

None known.

#### 10.6. Hazardous decomposition products

| <u>Substance</u> | <u>Condition</u> |
|------------------|------------------|
| None known.      |                  |

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

### 11.1. Information on Toxicological effects

#### Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

##### Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause target organ effects after inhalation.

##### Skin Contact:

Contact with the skin during product use is not expected to result in significant irritation.

##### Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

##### Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May cause target organ effects after ingestion.

#### Target Organ Effects:

##### Single exposure may cause:

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

##### Additional Information:

This product contains ethanol. Alcoholic beverages and ethanol in alcoholic beverages have been classified by the International Agency for Research on Cancer as carcinogenic to humans. There are also data associating human consumption of alcoholic beverages with developmental toxicity and liver toxicity. Exposure to ethanol during the foreseeable use of this product is not expected to cause cancer, developmental toxicity, or liver toxicity.

**Toxicological Data**

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

**Acute Toxicity**

| Name                | Route                      | Species | Value   |
|---------------------|----------------------------|---------|---|
| Overall product     | Ingestion                  |         | No data available; calculated ATE > 5,000 mg/kg |
| Ethyl alcohol w/w   | Dermal                     | Rabbit  | LD50 > 15,800 mg/kg                             |
| Ethyl alcohol w/w   | Inhalation-Vapor (4 hours) | Rat     | LC50 124.7 mg/l                                 |
| Ethyl alcohol w/w   | Ingestion                  | Rat     | LD50 17,800 mg/kg                               |
| Polyethylene glycol | Dermal                     | Rabbit  | LD50 > 20,000 mg/kg                             |
| Polyethylene glycol | Ingestion                  | Rat     | LD50 32,770 mg/kg                               |
| Fatty acids         | Ingestion                  | Rat     | LD50 > 5,000 mg/kg                              |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name                | Species | Value                     |
|---------------------|---------|---------------------------|
| Overall product     | Rat     | No significant irritation |
| Ethyl alcohol w/w   | Rabbit  | No significant irritation |
| Polyethylene glycol | Rabbit  | Minimal irritation        |
| Fatty acids         | Rabbit  | No significant irritation |

**Serious Eye Damage/Irritation**

| Name                | Species | Value                     |
|---------------------|---------|---------------------------|
| Ethyl alcohol w/w   | Rabbit  | Moderate irritant         |
| Polyethylene glycol | Rabbit  | Mild irritant             |
| Fatty acids         | Rabbit  | No significant irritation |

**Skin Sensitization**

| Name                | Species    | Value  |
|---------------------|------------|--|
| Ethyl alcohol w/w   | Human      | Some positive data exist, but the data are not sufficient for classification |
| Polyethylene glycol | Guinea pig | Not sensitizing  |

**Respiratory Sensitization**

| Name | Species | Value |
|------|---------|-------|
|------|---------|-------|

**Germ Cell Mutagenicity**

| Name                | Route    | Value  |
|---------------------|----------|--|
| Ethyl alcohol w/w   | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Ethyl alcohol w/w   | In vivo  | Some positive data exist, but the data are not sufficient for classification |
| Polyethylene glycol | In Vitro | Not mutagenic  |
| Polyethylene glycol | In vivo  | Not mutagenic  |

**Carcinogenicity**

| Name                | Route     | Species                 | Value  |
|---------------------|-----------|-------------------------|--|
| Ethyl alcohol w/w   | Ingestion | Multiple animal species | Some positive data exist, but the data are not sufficient for classification |
| Polyethylene glycol | Ingestion | Rat                     | Not carcinogenic   |

**Reproductive Toxicity****Reproductive and/or Developmental Effects**

| Name            | Route  | Value                            | Species | Test Result | Exposure Duration |
|-----------------|--------|----------------------------------|---------|-------------|-------------------|
| Overall product | Dermal | Not toxic to female reproduction | Rat     | NOAEL 0.3   | during            |

|                     |               |   |       |  |                              |
|---------------------|---------------|---|-------|--|------------------------------|
| Overall product     | Dermal        | Not toxic to male reproduction  | Rat   | mL<br>NOAEL 0.15 mL                        | gestation<br>93 days         |
| Overall product     | Dermal        | Not toxic to development  | Rat   | mL<br>NOAEL 0.3 mL                         | during gestation             |
| Ethyl alcohol w/w   | Inhalation    | Not toxic to development  | Rat   | mg/l<br>NOAEL 38 mg/l                      | during gestation             |
| Ethyl alcohol w/w   | Ingestion     | Some positive developmental data exist, but the data are not sufficient for classification              | Rat   | mg/kg/day<br>NOAEL 5,200 mg/kg/day         | premating & during gestation |
| Polyethylene glycol | Ingestion     | Not toxic to female reproduction  | Rat   | mg/kg/day<br>NOAEL 1,125 mg/kg/day         | during gestation             |
| Polyethylene glycol | Ingestion     | Not toxic to male reproduction  | Rat   | mg/kg/day<br>NOAEL 5699 +/- 1341 mg/kg/day | 5 days                       |
| Polyethylene glycol | Not Specified | Some positive reproductive/developmental data exist, but the data are not sufficient for classification |       | NOEL N/A                                   |                              |
| Polyethylene glycol | Ingestion     | Some positive developmental data exist, but the data are not sufficient for classification              | Mouse | mg/animal/day<br>NOAEL 562 mg/animal/day   | during gestation             |

### Target Organ(s)

#### Specific Target Organ Toxicity - single exposure

| Name                | Route      | Target Organ(s)                   | Value  | Species                 | Test Result                | Exposure Duration |
|---------------------|------------|-----------------------------------|--|-------------------------|----------------------------|-------------------|
| Ethyl alcohol w/w   | Inhalation | central nervous system depression | May cause drowsiness or dizziness  | Human                   | mg/l<br>LOAEL 2.6 mg/l     | 30 minutes        |
| Ethyl alcohol w/w   | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification | Human                   | mg/l<br>LOAEL 9.4 mg/l     | not available     |
| Ethyl alcohol w/w   | Ingestion  | central nervous system depression | May cause drowsiness or dizziness  | Multiple animal species | NOAEL not available        |                   |
| Ethyl alcohol w/w   | Ingestion  | kidney and/or bladder             | Some positive data exist, but the data are not sufficient for classification | Dog                     | mg/kg<br>NOAEL 3,000 mg/kg |                   |
| Polyethylene glycol | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification | Rat                     | mg/l<br>NOAEL 1.008 mg/l   | 2 weeks           |

#### Specific Target Organ Toxicity - repeated exposure

| Name              | Route      | Target Organ(s)  | Value  | Species | Test Result            | Exposure Duration |
|-------------------|------------|--|--|---------|------------------------|-------------------|
| Overall product   | Dermal     | heart   endocrine system   bone, teeth, nails, and/or hair   bone marrow   hematopoietic system   liver   immune system   muscles   nervous system   eyes   kidney and/or bladder   respiratory system   vascular system | All data are negative  | Rat     | mL<br>NOAEL 0.15 mL    | 93 days           |
| Ethyl alcohol w/w | Inhalation | liver  | Some positive data exist, but the data are not sufficient for classification | Rabbit  | mg/l<br>LOAEL 124 mg/l | 365 days          |
| Ethyl alcohol w/w | Inhalation | hematopoietic system   immune system   | Some positive data exist, but the data are not sufficient for classification | Rat     | mg/l<br>NOAEL 25 mg/l  | 14 days           |
| Ethyl alcohol w/w | Ingestion  | liver  | Some positive data exist, but the  | Rat     | LOAEL                  | 4 months          |



|                     |            |  |  |     |                       |          |
|---------------------|------------|--|--|-----|-----------------------|----------|
|                     |            |  | data are not sufficient for classification                                   |     | 8,000 mg/kg/day       |          |
| Ethyl alcohol w/w   | Ingestion  | kidney and/or bladder  | Some positive data exist, but the data are not sufficient for classification | Dog | NOAEL 3,000 mg/kg/day | 7 days   |
| Polyethylene glycol | Inhalation | respiratory system   | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 1.008 mg/l      | 2 weeks  |
| Polyethylene glycol | Ingestion  | kidney and/or bladder  | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 5,640 mg/kg/day | 13 weeks |
| Polyethylene glycol | Ingestion  | heart   endocrine system   hematopoietic system   liver   nervous system | All data are negative  | Rat | NOAEL 5,640 mg/kg/day | 13 weeks |

**Aspiration Hazard**

| Name | Value |
|------|-------|
|------|-------|

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

**SECTION 12: Ecological information****Ecotoxicological information**

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

**Chemical fate information**

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

**SECTION 13: Disposal considerations****13.1. Disposal methods**

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Incinerate in a permitted waste incineration facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

**SECTION 14: Transport Information**

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

**SECTION 15: Regulatory information****15.1. US Federal Regulations**

Contact 3M for more information.

**311/312 Hazard Categories:**

Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

**15.2. State Regulations**

Contact 3M for more information.

**15.3. Chemical Inventories**

The components of this product are in compliance with the chemical notification requirements of TSCA. Commercial use of this material is regulated by the FDA.

Contact 3M for more information.

**15.4. International Regulations**

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**SECTION 16: Other information**

**NFPA Hazard Classification**

Health: 1 Flammability: 3 Instability: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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